

Patent Claims

What is claimed is:

1. A method for reducing the contamination of at least one optical component that is contained inside a beam guidance space and that is held by a frame defining the beam guidance space, comprising:
coating the surfaces of the frame neighboring the beam guidance space at least partially with a degassing barrier layer.
2. A method according to claim 1, wherein the degassing barrier layer is chosen such that it does not increase reflectivity.
3. A method according to claim 1, wherein the degassing barrier layer is designed such that it does not increase reflectivity for UV light with wavelengths of 157 nm, 193 nm, 248 nm, and 365 nm.
4. A method according to claim 1, wherein the degassing barrier layer is a chemically deposited nickel layer, or silver, gold, or tantalum layer.
5. A method according to claim 4, wherein the degassing barrier layer is a chemically deposited nickel layer in form of a NiP alloy layer applied in a chemical depositing process in an electrolyte that contains sodium hypophosphite as a reducing agent.
6. An optical beam guidance system for UV light comprising:
 - a frame defining a beam guidance space and containing at least one optical component inside the beam guidance space; and
 - a degassing barrier layer that at least partially coats the surfaces of the frame neighboring the beam guidance space.

7. An optical beam guidance system according to claim 6, wherein the degassing barrier layer does not increase reflectivity.
8. An optical beam guidance system according to claim 6, wherein the degassing barrier layer does not increase reflectivity for UV light with wavelengths of 157 nm, 193 nm, 248 nm, and 365 nm.
9. An optical beam guidance system according to claim 6, wherein the degassing barrier layer is a chemically deposited nickel layer, or silver, gold, or tantalum layer.
10. An optical beam guidance system according to claim 9, wherein the chemically deposited nickel layer is a NiP alloy layer deposited chemically in an electrolyte that contains sodium hypophosphite as a reducing agent.
11. An optical beam guidance system according to claim 6, wherein the optical beam guidance system is configured as a lithography illumination system.